Headquarters U. S. Air Force

I n t e g r i t y - S e r v i c e - E x c e l l e n c e

One Air Force, One Network "IT Strategic Initiatives"

Briefing to

FRB
28 Feb 01

Col. Allan Mink
AF/SC

U.S. AIR FORCE

U.S. AIR FORCE

- **Motivation -- Increased Combat Power for America's Airmen**

- **Challenges -- Where We're Heading**

Catalyst for Change

"This is not about changing information technology or the network. It is about increasing our combat power by leveraging the advantages information technology offers."

-- General Michael E. Ryan, Air Force Chief of Staff

Industry Lessons Learned

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Need For Change
Lessons from Industry

Cisco Approach -

Oracle Approach

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- **Employee service**
  - **Travel/expense**
  - **Benefits enrollm**
  - **Stock informatio**
  - **Internal IT help d**
  - **Directory and organization cha**
- **Workflow**
  - **Purchasing/ORM**
  - **Recruiting online**
- **EIS / Virtual Clos**
- **Communications**
  - **Company wide br**
  - **Video on demand**
  - **CiscoCast "Push"**

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- **Consolidate Internally**
  - **What Does E-Mail Cost?**
  - **Consolidate Systems**
  - **Leverage Abundances**
- **Self-Service Everywhere**
  - **What Can't be Self-Service**
  - **Transactions to the Endpo**
  - **Meet Expectations, Impro**
- **Automate Completely**
  - **Where Does the Process**
  - **B2B Exchanges**
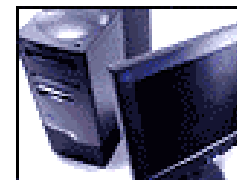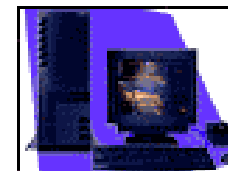 - **Standards-based Solution**

"We intend to take $1 bi

IBM Approach

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- **Increase operational efficiencies**
  - **Reduced number of server sites from 155 to 25**
  - **Reduced response time from 20 minutes to near real-time**

In

Integrity -

Integrity - Service - Excellence

5

U.S. AIR FORCE

"General Ryan and I are convinced we can no longer run the Air Force with one foot in the future and one foot in prehistoric times."
- **Secretary of the Air Force, 6 Jul 00**

Improve combat effectiveness and daily mission performance via the combat power of our information technology networks

Better, faster decisions than our adversaries

———————

Enhanced vigilance, reach, and power

Focus Group Kick Off July 2000

Chief of Staff addressing IT Summit focus group members from across the Air Force before turning them loose to begin work.

"Modernizing our information systems ranks with other top Air Force modernization priorities." **- Chief of Staff of the Air Force (CSAF), Memo to AF Members**

The Road Traveled
IT Summit Focus Groups

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Mr. Gilligan — **Dr. Delaney** — **Lt Gen Woodward**

**IT Summit Lead
Col Mink**

AF Portal
Lt Col Dave Packham

Directory Services
WCdr Andy Powell

Server Consolidation
Maj Stan Andray

Enterprise CONOPs
Col Doug Donnell

Resources
Col Roy Cahoon (FM)

Acquisition Agility
Mr. Tom Topolski (AQ)

Comm/Comp Transport
Lt Col Marjorie Davis

C2 Msn Support
Maj Sue Smith

Marketing
Lt Col Don Greiman

Network Apps Lab
Lt Col Tierney (AFCA)

Info Assurance
Lt Col Susan Pardo

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Portal, Web-Enabled Apps,
AF White Pages

"Just do it...and by Jul 01." CSAF, Aug 00

CORONA Fall 2000

SECAF, CSAF, AF Chief Information Officer and Deputies test fly AF portal, "My.AF" and One Air Force...One Network.

"We met every challenge set for CORONA."
SECAF, 13 Dec 00

Since Aug 00...

- **Enterprise view, standards-based in "web time"**
  (30-90 days vs months or years)
- **40,000 My.AF users (26 Feb 01)**

AF Portal and Web-Enabled Applications

Over 80 applications and services...web-enabled, customized views; subscription (push) and self-service (pull); AF White Pages

Server Consolidation
Immediate economies of scale; MAJCOMs developing plans; success at Charleston

External Review
DoD and Industry expert validation

C2 CONOPS
"Right on!"
--COMACC
Delivery to CORONA South

Outreach
CSAF NOTAM 00-5 Nov 00 *intercom* press releases Computer World nomination

Air Force Examples
IT-Leveraged Efficiencies and Savings

ACC: Reengineers IT purchases with ACCWAY	**$47M cost avoidance in FY09** **$1.37M saved on HW purchases** **79 percent of cost avoidance imbedded in processes**
IL: Improves Availability of Weapon System Status with vIL	**Tail-number based NMC status from monthly to live** **On-line maintenance trend analysis**
TBMCS: Web enable Air Battle Planning	**Smaller footprint** **Improved information access** **Reduced complexity**
Mobility 2000: Reengineers Airlift planning & execution	**Decreased mission planning time** **Fewer delays, reduced cost of airlift** **Increased pilot time in air**
vMPF: Online military personnel services	**Reduces time away from flightline** **Supports AEF deployed personnel**

U.S. AIR FORCE

SECRETARY OF THE AIR FORCE
WASHINGTON

03 JAN 2001

MEMORANDUM FOR ALMAJCOM-FOA-DRU/CC
DISTRIBUTION C plus 11 WG

SUBJECT: Air Force (AF) Information Technology (IT) Initiatives (Single Air Force Portal, Email/Network/Server Consolidation, and Improved Visibility into Information Technology Expenditures)

Over the past six months we have begun to explore ways for the Air Force to better leverage the enormous power of information and better harness the rapid advances in information supporting technologies. Examinations of transformations that have occurred in companies like Cisco, Oracle, EDS, IBM and Sun have shown strikingly similar characteristics. These companies have focused on information as a strategic asset and have rapidly moved to reengineer processes and exploit web and commercially available technologies. The results have been dramatically improved operations and substantial reductions in costs to operate. Moreover, these transformations have occurred in months, not years!

The IT Summit this past summer identified a number of initiatives to begin a similar transformation in the Air Force. The success of these efforts, including the initial Air Force Portal, the efforts to consolidate email servers, and other process initiatives, have shown that we are on the right path. We now need to move to the next stage of the transformation by leveraging these initial efforts and moving toward the vision of a dramatically different paradigm for using and managing information. Therefore, we are directing the following three initiatives as the next steps.

First, we are establishing the goal that all unclassified combat/mission support and service applications be available through the single Air Force portal by 1 July 2001. Second, building on the successful consolidation efforts, we are establishing the goal of consolidation of all networks, servers and desktop services on each base with the target of consolidating at least one base per MAJCOM by August 2001 and consolidation of all Air Force bases by September 2002. Finally, in order to ensure visibility of our over $4 Billion in Information Technology expenditures, we are directing the AF CIO to establish and oversee an integrated review of IT budget submissions starting with the FY '03 budget. Further description of each of these initiatives is in the Attachment.

We believe the initiatives tasked with this memorandum are essential to helping transform the Air Force into an information based and network centric organization. The portal and consolidation initiatives will require some small investments to achieve the operational benefits that we have seen from Air Force prototypes and similar efforts within industry. The Headquarters Air Force will fund central support activities for the portal. Likewise, Major Commands and Functional communities are tasked to evaluate and reprioritize resources to ensure that these objectives are achieved.

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3 Jan 01 Memo released directing initiatives as next steps in achieving the AF's vision of "One AF -- One Network"

Consolidate all networks, servers, and desktop services on each base

- Jun 01 - Consolidate All Email Servers
  -- All Bases
- Aug 01 - Consolidate All Network, Server, & Desktop Services
  -- At least one base per MAJCOM
- Sep 02 - Consolidate All - At All bases

Types of Servers

- Email
- Web
- File/Print
- Functional Application
- Classified

Definitions

- **"Available through portal"** = equals link
  to application or greater
- **"Consolidate all"** = logical, physical where makes sense, base ('02) or better ('02+)
- **"Networks"** = on base, one network with DISA provided AF COI
- **" Servers"** =core and functional
- **"Desktop Services"** = user level data

Clarifications

- Core Services - infrastructure, network management, security, email, web, print, and file
- Enterprise boundary protection - NOSC level COI, network firewalls, routing, intrusion detection, vulnerability scanning
- Base level boundary protection - router based firewall, host based intrusion detection, user level security

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- **C4ISP:** we can field and sustain the application
- **Certificate of Networthiness:** the application flies safely and predictably, meets architecture "specs"
  - Built anywhere, used everywhere
- **Certificate to Operate:** the application is cleared for use on the job by local authorities

Certification

C4ISP!

- A Must to Operate

Langley AFB

C4ISP - Success for Interoperability and Security!

Server Consolidation AF IT Initiatives Memo

Several Concerns
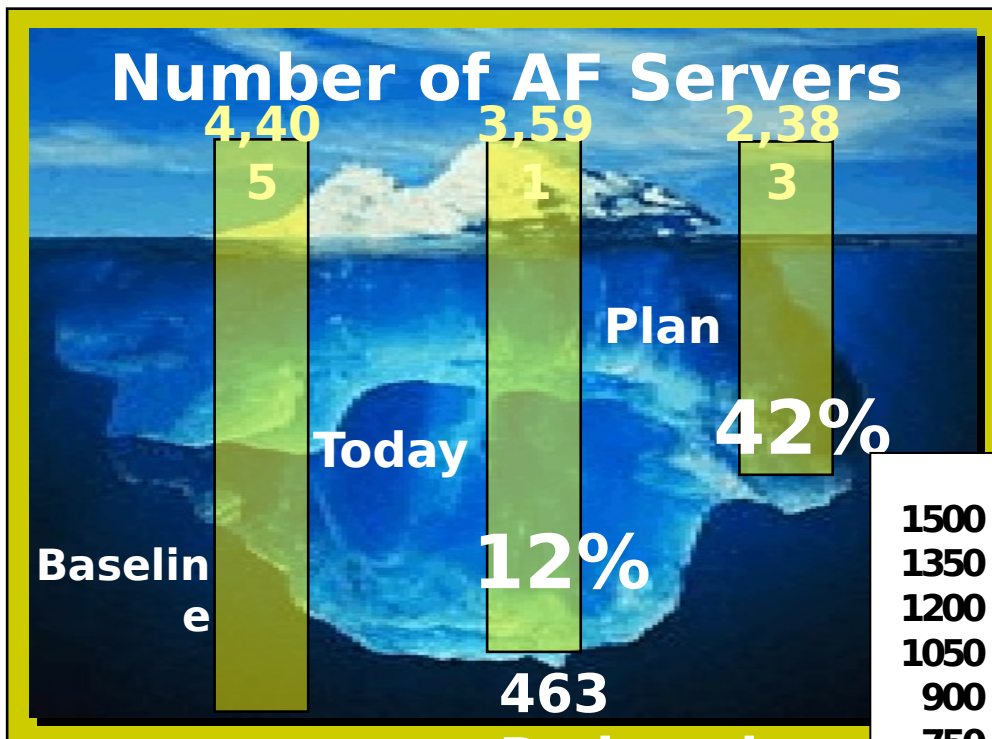
Focus Groups Soliciting Feedback

- **Funding,...**
- **Diversity/Survivability**
- **How much standardization required?**
- **Contracts,Tenant Support**
- **Migrate to GCSS or Consolidate Servers**
- **Metrics**
- **Functional Issues**
  - **Access to sensitive data (contracting, legal, etc.)**
  - **Consideration for who administers**
  - **Who is using Mgmt Tools to monitor func apps?**

Actively Working Issues

Information Infrastructure

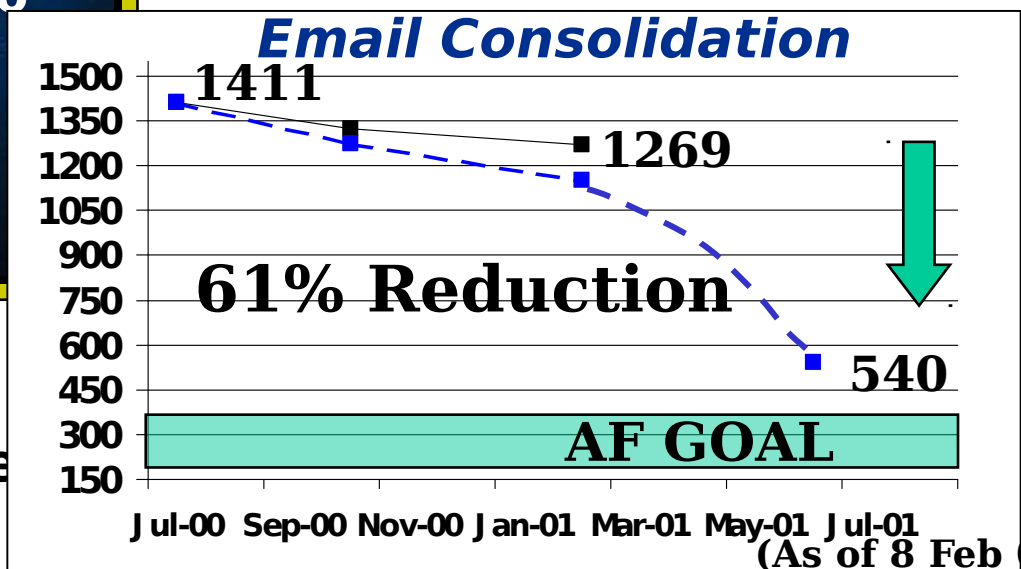*...nsolidation Update*

Number of AF Servers

4,405

3,591

2,383

Plan

42%

Today

12%

Baseline

463

- **Reduce Total Cost of Ownership**
  - ■ **Reduce $ Costs**
  - ■ **Free up manpower**

Email Consolidation

1411

1269

61% Reduction

540

AF GOAL

| | 1500 |
| 1350 |
| 1200 |
| 1050 |
| 900 |
| 750 |
| 600 |
| 450 |
| 300 |
| 150 |

Jul-00 Sep-00 Nov-00 Jan-01 Mar-01 May-01 Jul-01

(As of 8 Feb (

- ■ **Better Service Levels**
- ■ **Increase Workforce Efficie...**
- ■ **Improve Security**

MAJCOM E-Mail Server Consolidation Plans

U.S. AIR FORCE

Types of Servers Consolidated:	Yes	No	Future Consideration
E-mail	10	0	0
Web	6	0	4
File/Print	4	0	6
Functional Application	2	1	7
Classified	3	2	5

U.S. AIR FORCE

- **Consolidation Location**
  - **NOSC (1)**
  - **Base first, then regional centers (3)**
  - **Base only (4)**
  - **Unclear (2)**

- **Operating System**
  - **Win2K/Active Directory/Exchange 2000 (4)**
  - **NT 4.0 and Exchange 5.5 (1)**
  - **Operating system not specified (5)**

MAJCOM E-Mail Server Consolidation Plans

- **Storage Area Network (SAN)**
    - **EMC^2 (3)**
    - **Dell Power Vault (1)**
    - **No preference (6)**

- **Wide Area Network (Centralized Boundary Protection)**
    - **"Intranet" with limited NIPRNET access points (4)**
    - **No change (6)**

- **Focus on Comm & Computing Transport Layer**
- **18 Dec 00 - DoD Murder Board**
  - **OSD(C3I), DISA, Joint Staff, Army**
- **10 Jan 01 - Industry Request for Comment**
  - **Initial feedback:**
    - **Regional Server Consolidation**
    - **Single Operating System**
    - **Storage Area Networks**
    - **Standards vs. Products-Based Approach**
  - **Further analysis ongoing**
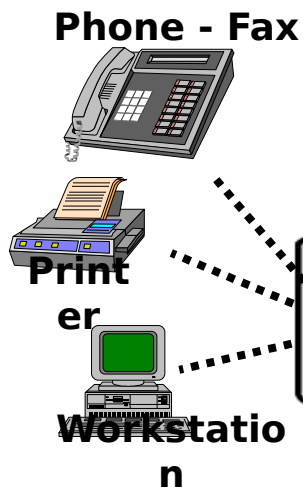   - **17 responses - ~half valuable info, others sales pitches**

Computing & Transport Layer: The Entry Fee

Last Aerospace Mile

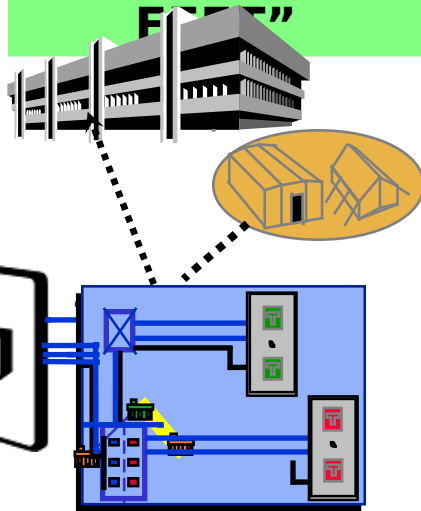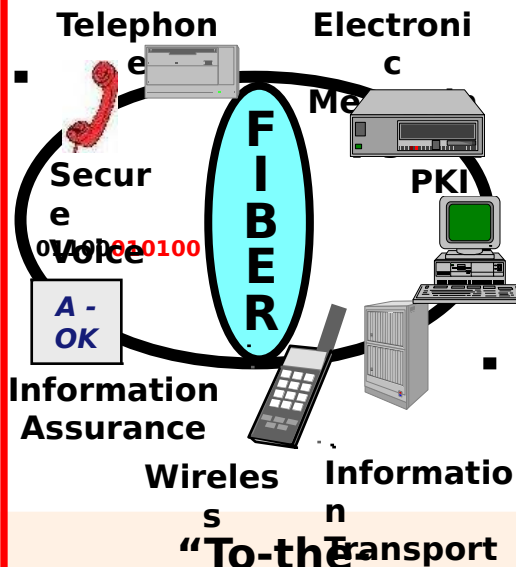| WORKPLACE	"LAST 400 FEET"	INSIDE THE GATE	LONG HAUL
Phone - Fax		Telephone	
Printer		Electronic Mail	PKI
Workstation		Secure Voice 0101010100 A - OK	FIBER
		Information Assurance	
		Wireless	Information Transport
			DSN DRSN DCTN FTS 2000 DISN DMS NIPRNET SIPRNET
"To-the-Desktop"	"To-the-Wall"	"To-the-Building"	"To-the-Base"
Locally Acquired, Managed Mostly 3400		*ESC Managed Mostly 3080*	*Defense Working Capital Fund*

Enterprise Discipline to Deliver Robust, Secure Computing & Transport Layer

17

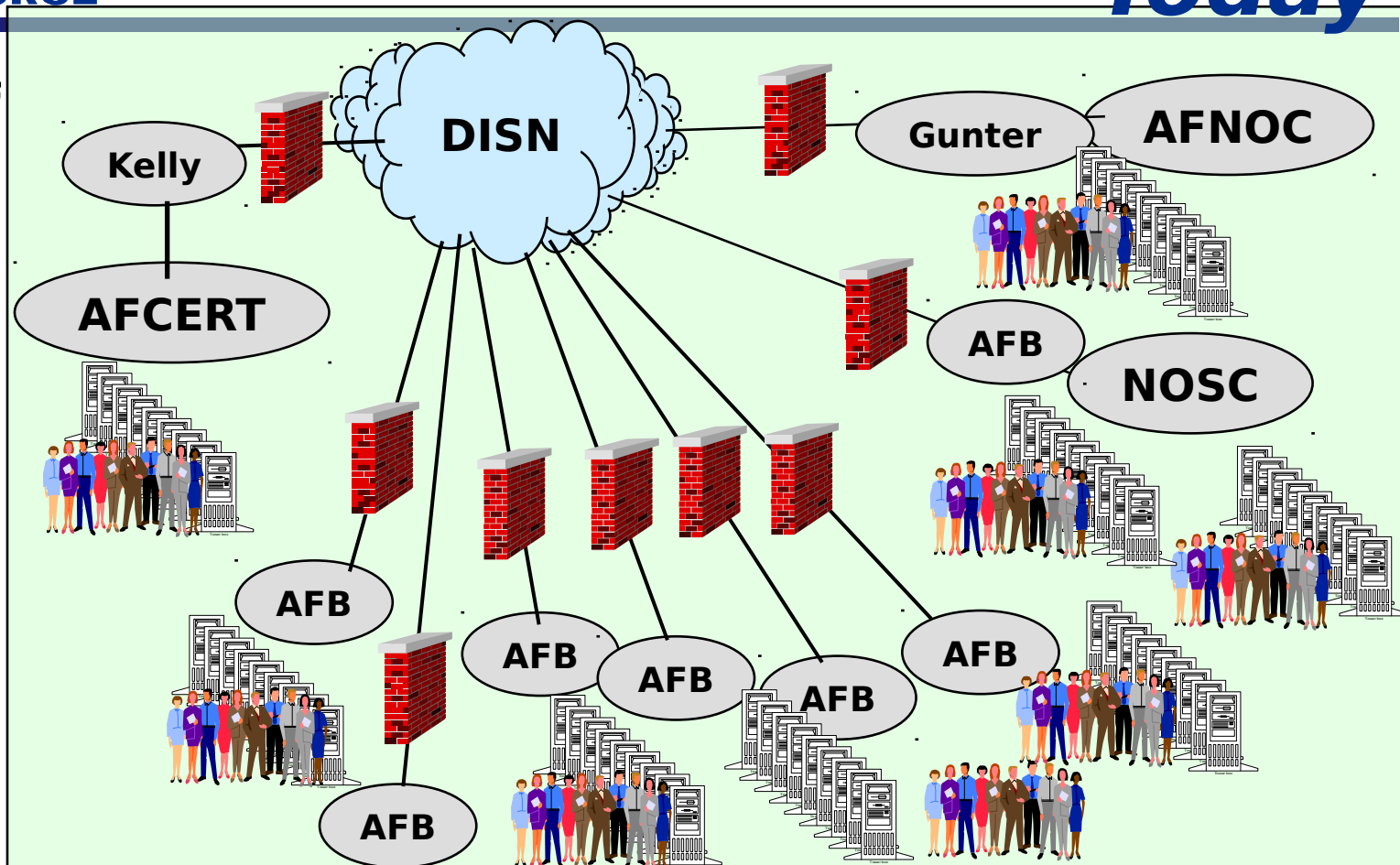# AF Transport Layer -- Today

- Lots of people & equipment

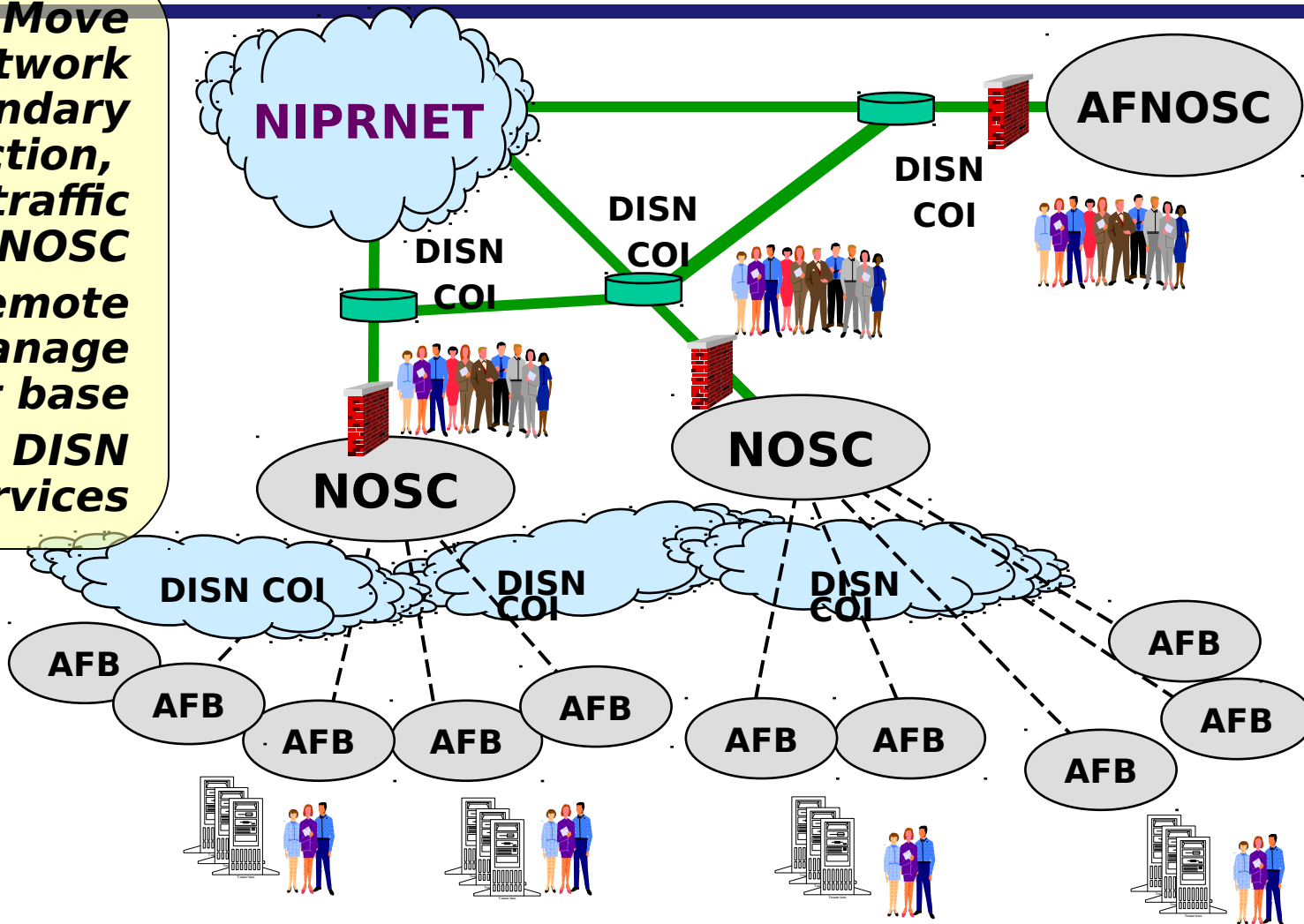- Hard to defend, operate and maintain

Transport Plan-- Proposed Transport Layer

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- *Move network boundary protection, NIPRNET traffic to NOSC*

- *Remote manage servers at base*

- *Employ DISN COI Services*

NIPRNET

AFNOSC

DISN COI

DISN COI

DISN COI

NOSC

NOSC

DISN COI

DISN COI

DISN COI

AFB

AFB

AFB

AFB

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Lessons Learned

- **Small, cross-cutting teams ("big picture" or "outcome-based" viewpoint)**

    + Senior officer support

    + <u>Dot.com development and delivery velocity</u>

    = more effective execution and happy warriors!

    - No one knows and shows it better than you!

- **Functional community and SC partnership**

    - No one has done it better than you and us!

- **Key to Continued Success: "ripple of handshakes" at every echelon**

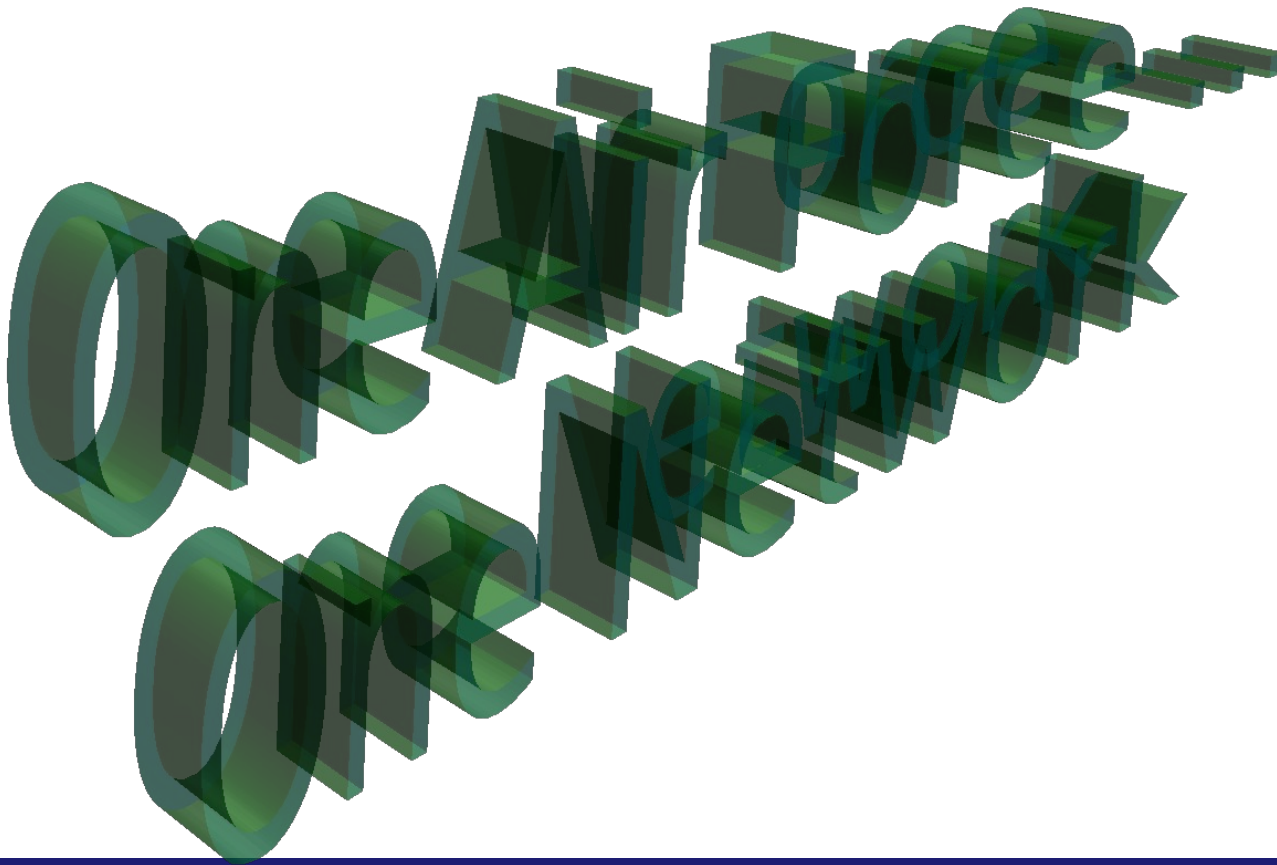   **On-Track for Standards-Based Portal**

SC "Must-Fix" Actions

- **Bandwidth**
- **IT applications delivery process**
- **Disciplined network certification process**
- **Publish development guides**
- **Stabilize and measure network performance**
- **Community of Interest networks (COINs) -- Virtual Private networks (VPNs) -- Security -- PKI -- CAC -- Security -- Directory services**
- **Resourcing task -- C&I Panel**
- **Functional partnership**

Questions?